31. (Once Amended) A heat-exchanger tube suitable for use in an internal heat exchanger of a motor-vehicle high-pressure air-conditioning system, the heat-exchanger tube comprising:

B'

a central channel having an inner wall from which a plurality of projections extend into the central channel; and

a plurality of outer channels that are arranged concentric to the central channel and that are separated from each other by partitions.

Please add the following new claims.

32. (New) The heat-exchanger tube according to claim 31, wherein the number of partitions is greater than the number of projections.

B2

33. (New) The heat-exchanger tube according to claim 31, wherein the width of the outer channels at their radially inner side is smaller than the height of the outer channels measured in the radial direction.

34. (New) The heat-exchanger tube according to claim 31, wherein the width of the outer channels at their radially outer side is smaller than the height of the outer channels measured in the radial direction.

35. (New) The heat-exchanger tube according to claim 31, wherein the sides of the partitions are substantially parallel.

36. (New) The heat-exchanger tube according to claim 31, wherein all outer channels exhibit a substantially similar cross section.

37. (New) The heat-exchanger tube according to claim 31, wherein the outer channels exhibit at least two different cross sections.

38. (New) The heat-exchanger tube according to claim 31, wherein all partitions exhibit a uniform wall thickness.

39. (New) The heat-exchanger tube according to claim 31, wherein a wall is provided between the central channel and the outer channels, the wall having a thickness that is greater than the wall thickness of the partitions.

40. (New) The heat-exchanger tube according to claim 31, wherein a first wall region is provided between the central channel and the outer channels, the first wall region having a thickness that is greater than the thickness of a wall region that seals the outer channels from an outside surface of the heat-exchanger tube.

41. (New) The heat-exchanger tube according to claim 31, wherein the outer channels exhibit a wedge-shaped cross section.

42. (New) The heat-exchanger tube according to claim 31, wherein the central channel exhibits a substantially cross-shaped cross section.

43. (New) The heat-exchanger tube according to claim 31, wherein the projections exhibit a substantially triangular cross section.

44. (New) The heat-exchanger tube according to claim 31, wherein the projections include sides that form an angle of approximately 90 degrees with respect to each other.

45. (New) The heat-exchanger tube according to claim 31, wherein the projections are ribs.

46. (New) The heat-exchanger tube according to claim 45, wherein the ribs are substantially straight in the axial direction.

47. (New) The heat-exchanger tube according to claim 31, wherein the tube material is aluminum.

48. (New) A heat-exchanger comprising:

a heat-exchanger tube that includes a central channel having an inner wall from which a plurality of projections extend into the central channel and a plurality of outer channels that are arranged concentric to the central channel and that are separated from each other by partitions.

49. (New) The heat-exchanger according to claim 48, wherein the heat-exchanger tube includes two ends that are each connected to a connecting piece having a collection chamber that combines all outer channels into one channel.

50. (New) The heat-exchanger according to claim 49, wherein the connecting pieces include a means for uniformly distributing a fluid stream between the outer channels or for uniformly combining a fluid stream arriving from the outer channels.

51. (New) The heat-exchanger according to claim 50, wherein the means of uniformly distributing or combining the fluid stream is a diffuser chamber.

52. (New) The heat-exchanger according to claim 51, wherein the diffuser chamber is substantially conical and includes at least two channels.

53. (New) The heat-exchanger according to claim 50, wherein the means for uniformly distributing or combining the fluid stream is a twisting chamber.

54. (New) The heat-exchanger according to claim 53, wherein the twisting chamber exhibits a substantially cylindrical cross section.

55. (New) The heat-exchanger according to claim 53, wherein the twisting chamber includes a connection having a longitudinal axis that does not intersect a longitudinal axis of the connecting piece.

56. (New) The heat-exchanger according to claim 49, wherein the connecting pieces on both ends of the heat-exchanger tube are substantially similar to each other.

57. (New) The heat-exchanger according to claim 49, wherein the connecting pieces are connected to the heat-exchanger tube by a press-fit connection.

58. (New) The heat-exchanger according to claim 57, wherein the press-fit connection is a press-fit connection produced through plastic deformation of the connecting pieces.

59. (New) The heat-exchanger according to claim 57, wherein the connecting pieces include a connection base having a tubular needle that extends into the central channel and that is connected to the inner wall of the central channel by the press-fit connection.

60. (New) An air-conditioning system suitable for use in a motor vehicle, comprising:

a compressor that provides a compressed fluid to an output;

a condenser that is connected to the compressor by a cooling line for cooling the compressed fluid;

an expansion valve that receives the cooled fluid through a high-pressure line from the condenser and outputs the fluid to an evaporator;

a return line through which the fluid from the evaporator is returned to the compressor; and

a heat exchanger having a heat-exchanger tube that includes a central channel having an inner wall from which a plurality of projections extend into the central channel and a plurality of outer channels that are arranged concentric to the central channel and that are separated from each other by partitions; and

wherein the central channel is connected to the high-pressure line and the outer channels are connected to the return line.

It is believed that there are no additional fees due with the submission of this paper. However, if any additional fees are required in connection with the filing of this paper that are not identified, permission is given to charge Account No. 18-0013 in the name of Rader, Fishman & Grauer PLLC.

Respectfully submitted,

Date: January 22, 2002

Bradley J. Diedrich, Esq. (47,526)
Michael B. Stewart, Esq. (36,018)
Rader, Fishman & Grauer PLLC
39533 Woodward Ave., Suite 140
Bloomfield Hills, Michigan 48304
(248) 594-0600
Attorney for Applicants

R0134846